



## State of Washington REPORT OF EXAMINATION FOR TRUST WATER RIGHT

**PRIORITY DATE**  
June 30, 1870

**WATER RIGHT NUMBER**  
CS4-01939sb9

**TRUST TERM**  
Permanent

**MAILING ADDRESS**  
FABIAN KUCHIN, JR  
1404 W DRY CREEK RD  
ELLENSBURG, WA 98926-9439

**SITE ADDRESS (IF DIFFERENT)**

**AGENT FOR OWNER**  
ANNE WATANABE  
YAKIMA RIVER MITIGATION SERVICES LLC  
PO BOX 687  
ROSLYN, WA 98941

### Purpose and Quantity

Trust water right for the purposes of instream flow and water banking to offset consumptive use associated with new groundwater uses in the Yakima Basin. The maximum quantities for instream flow in the primary reach are 0.312 cubic-feet per second (cfs), and 48.0 acre-feet (ac-ft) annually. The flow rates and quantities allocated to the secondary reach are as follows:

Period	Secondary Reach	
	Flow (cfs)	Acre-feet
05/13 -05/31	0.076	2.73
06/01 -06/30	0.102	6.05
07/01 -07/31	0.135	8.29
08/01 -08/31	0.107	6.61
09/01 -09/30	0.063	3.76
10/01 -10/15	0.019	0.54
<b>ANNUAL TOTAL</b>		<b>27.89</b>

**Note:** "Primary reach" means that portion of a water body that benefits from both the former consumptive use and former return flow waters of a water right.

"Secondary reach" means that portion of a water body that benefits only from the former consumptive use of a water right.

**Trust Water Right Place of Use**

WATERBODY	TRIBUTARY TO	COUNTY	WATER RESOURCE INVENTORY AREA
Whiskey, Mercer and Wilson Creeks and Yakima River	Columbia River	Kittitas	39-Upper Yakima

REACH	WATERBODY	RIVER MI	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Begin Primary	Whiskey Creek	1.5	18N	18E	34	NENW	47.012579	-120.573140
End Primary	Mercer Creek	0.17	17N	18E	2	NWSW	46.988247	-120.557379
Begin Secondary	Mercer Creek	0.17	17N	18E	2	NWSW	46.988247	-120.557379
End Secondary	Yakima River	0.0	9N	28E	24		46.24272	-119.24396

Latitude/Longitude Coordinates may approximate reach segments. Datum: NAD83

**Provisions**

This Trust portion of Claim 01939 providing instream and/or mitigation water to the TWRP will be subject to the Trust Water Right Agreement between Ecology and Yakima River Mitigation Water Services LLC dated September 30, 2011, when it has been amended to include this Trust right.

**PORTION OF WATER RIGHT  
NOT BEING TRANSFERRED TO INSTREAM FLOW  
WRTS File # CS4-01939sb9**

<b>PRIORITY DATE</b>	<b>WATER RIGHT NUMBER</b>
June 30, 1870	Yakima Adjudication Court Claim No. 01939

<b>MAILING ADDRESS</b>	<b>SITE ADDRESS (IF DIFFERENT)</b>
FABIAN KUCHIN, JR 1404 W DRY CREEK RD ELLENSBURG, WA 98926-9439	

**Total Quantity Authorized for Withdrawal or Diversion**

<b>WITHDRAWAL OR DIVERSION RATE</b>	<b>UNITS</b>	<b>ANNUAL QUANTITY (AF/YR)</b>
0.338	CFS	52

**Purpose**

Irrigation of 9.65 acres from April 1 to October 15

**REMARKS**

48 acre-feet (ac-ft) of the original 100 ac-ft under the 1870 portion of Claim No. 01939 has been put into Ecology's TWRP to be used for instream flow and/or water banking. 12 acres within the POU are to be fallowed in accordance with this ROE and the Trust Water Right Agreement between Ecology and Yakima River Mitigation Water Services dated September 30, 2011 when amended to include this change to Trust.

**Source Location**

<b>COUNTY</b>	<b>WATERBODY</b>	<b>TRIBUTARY TO</b>	<b>WATER RESOURCE INVENTORY AREA</b>
Kittitas	Whiskey Creek	Yakima River	39

**POINT OF DIVERSION**

NE¼ NW¼ of Section 34, T. 18 N., R. 18 E.W.M.

Datum: NAD83/WGS8

**Place of Use**

E½ NW¼ of Section 34, T. 18 N., R. 18 E.W.M.

**LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE**

That part of the E½ NW¼ of Section 34, T. 18 N., R. 18 E.W.M., lying north and east of the northwesterly right-of-way of State Highway No. 3, and south and west of Whiskey Creek, Except: highway and railroad rights-of-way.

## Provisions

### Measurements, Monitoring, Metering and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173, which describes the requirements for data accuracy, device installation and operation, and information reporting.

### Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Annually
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (cfs)

Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Central Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Regional Office for forms to submit your water use data.

### Department of Fish and Wildlife Requirement(s)

The intake(s) must be screened in accordance with Department of Fish and Wildlife screening criteria (pursuant to RCW 77.57.010, RCW 77.57.070, and RCW 77.57.040).

Department of Fish and Wildlife (360) 902-2534  
Attention: Habitat Program <http://wdfw.wa.gov/conservation/habitat/planning/screening/>  
600 Capitol Way N.  
Olympia WA 98501-1091

No dam or weir shall be constructed in connection with this diversion.

### Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, will have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

### Real Estate Excise Tax

This decision may indicate a Real Estate Excise Tax liability for the seller of water rights. The Department of Revenue has requested notification of potentially taxable water right related actions, and therefore will be given notice of this decision, including document copies. Please contact the state Department of Revenue to obtain specific requirements for your project.

Department of Revenue	Phone: (360) 570-3265
Real Estate Excise Tax	Internet: <a href="http://dor.wa.gov/">http://dor.wa.gov/</a>
PO Box 47477	E-mail: <a href="mailto:REETSP@DOR.WA.GOV">REETSP@DOR.WA.GOV</a>
Olympia WA 98504-7477 or	

### Findings of Facts and Decisions

Upon reviewing the investigator's report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not impair existing rights or be detrimental to the public interest.

Therefore, I ORDER the requested changes of place and purpose of use under Trust Water Right Application No. CS4-01939sb9, are approved subject to existing rights and the limitations specified above.

### Your Right To Appeal

This Decision may be appealed pursuant to RCW 34.05.514(3), RCW 90.03.210(2), and Pretrial Order No. 12 entered in *State of Washington, Department of Ecology v. James Acquavella, et al.*, Yakima County Superior Court No. 77-2-01484-5 (the general adjudication of surface water rights in the Yakima River Basin). The person to whom this Decision is issued, if he or she wishes to file an appeal, must file the notice of appeal with the Yakima County Superior Court **within thirty (30) days of receipt of this Decision**. Appeals must be filed with the Superior Court Clerk's Office, Yakima County Superior Court, 128 North 2<sup>nd</sup> Street, Yakima WA 98901, RE: Yakima River Adjudication. Appeals must be served in accordance with Pretrial Order No. 12, Section III ("Appeals Procedures"). The content of the notice of appeal must conform to RCW 34.05.546. Specifically, the notice of appeal must include:

- The name and mailing address of the appellant;
- Name and address of the appellant's attorney, if any;
- The name and address of the Department of Ecology;
- The specific application number of the decision being appealed;
- A copy of the decision;
- A brief explanation of Ecology's decision;
- Identification of persons who were parties in any adjudicative proceedings that led to Ecology's decision;
- Facts that demonstrate the appellant is entitled to obtain judicial review;
- The appellant's reasons for believing that relief should be granted; and
- A request for relief, specifying the type and extent of relief requested.

The "parties of record" who must be served with copies of the notice of appeal under RCW 34.05.542(3) are limited to the applicant of the decision subject to appeal, Ecology and the Office of the Attorney General.

All others receiving notice of this Decision, who wish to file an appeal, must file the appeal with the Yakima County Superior Court within **thirty (30) days of the date the Order was mailed**. The appeal must be filed in the same manner as described above.

Signed at Yakima, Washington, this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

\_\_\_\_\_  
Mark Kemner, LHG, Section Manager  
Water Resources Program/CRO

## BACKGROUND

### Description and Purpose of the Proposed Change

On July 8, 2011, Yakima River Mitigation Water Services LLC, on behalf of Fabian Kuchin Jr. of Ellensburg, Washington filed an application to the Department of Ecology (Ecology) to enter a portion of Adjudicated Court Claim No. 01939 (Claim No. 01939) into the Trust Water Right Program (TWRP). The application was accepted and assigned Control Number CS4-01939sb9.

This report of examination addresses the applicant's request to transfer 0.312 cubic feet per second (cfs) and 48 acre-feet per year (ac-ft/yr) of Claim No. 01939 to Ecology's TWRP for instream flow and water banking purposes to mitigate for new groundwater uses. Currently Claim No. 01939 allows a surface water diversion from Whiskey Creek within the Yakima River drainage, just west of Ellensburg within Water Resources Inventory Area (WRIA) 39. A portion of Claim No. 01939 will remain appurtenant to Mr. Kuchin's property.

Claim No. 01939 is made up of two water rights with different priority dates: June 30, 1870, and June 30, 1875, in the Yakima Superior Court matter of the *State Department of Ecology v. James J. Acquavella, et al (Acquavella)*, within Subbasin No. 9 (Wilson-Naneum). Each priority date pertains to a separate place of use. The total instantaneous and annual quantities authorized under Claim No. 01939 (both priority dates included) are 0.988 cubic-feet per second (cfs) and 152 acre-feet per year (afy) respectively for the irrigation of 38 acres. ***This trust water right application only pertains to that portion of Claim No. 01939 with the June 1870 priority date.*** The attributes of this portion of Claim No. 01939 and proposed changes are given in Table 1.

**Table 1**  
**Proposed Changes on 1870 Portion of Claim No. 01939**

Attributes	Existing Right	Proposed Changes	
		Trust Portion	Retained portion
Right Holder's Name	Fabian Kuchin, Jr.	Ecology's Trust Water Right Program	Fabian Kuchin, Jr.
Contact	Yakima River Mitigation Water Services, Inc.		
Priority Date	June 30, 1870	Same	Same
Source	Whiskey Creek	Whiskey Creek	Whiskey Creek

Table continued on page 8

Table continued from page 7

Attributes	Existing Right	Proposed Changes	
		<i>Trust Portion</i>	<i>Retained portion</i>
<b>Purpose of Use</b>	Irrigation of 25 acres (flood and sprinkler)	Instream flow & water banking to offset consumptive quantities associated with new groundwater uses.	Irrigation
<b>Instantaneous Rate</b>	0.65 cfs	<u>Primary Reach:</u> 0.312 cfs	0.338 cfs
<b>Annual Quantity</b>	100 ac-ft	<u>Primary Reach:</u> 48 af/yr  <u>Secondary Reach</u> Consumptive portion to be determined	52 ac-ft
<b>Period of Use</b>	April 1 - October 15	May 1 – Oct 15	April 1 - October 15
<b>Place of Use</b>	That part of the E½ NW¼ of Section 34, T. 18 N., R. 18 E.W.M., lying north and east of the northeasterly right-of-way of State Highway No. 3 and south and west of Whiskey Creek, EXCEPT: highway and rail road rights-of-way.	<u>Instream</u> Whiskey Creek, Mercer Creek, Wilson Creek to Yakima River to its confluence with the Columbia River	Remaining eastern portion of the original place of use. 9.65 acres

### Legal Requirements for the Proposed Change

RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point of diversion, place of use, and purpose of use may be changed if it would not result in harm or injury to other water rights.

A trust water right in the Yakima Basin is governed by Chapter 90.38 RCW, and water banking is governed by RCW 90.42.100. RCW 90.38.040(1) states that a trust water right acquired by the Department of Ecology shall be placed in the Trust Water Right Program to be managed by Ecology. Ecology shall issue a Certificate of Water Right in the name of the State of Washington for each trust water right it acquires.

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right.

This is necessary to establish whether the claim or right is eligible for change. *R.D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp*.

This application qualifies for priority processing under WAC 173-152-050(2)(c) whereby water right change applications may be processed prior to applications submitted at an earlier date when the proposed water use, if approved, would substantially enhance or protect the quality of the natural environment. Priority processing is concurrently justified under WAC 173-539A(1) where the application requests placing water into the Trust Water Right Program for water banking purposes within the Yakima River Basin.

## Public Notice

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Public notice is required before any trust water right is created or modified. Under RCW's 90.03.280 and 90.42.040(5)(a) the department shall, at a minimum, require that a notice be published in a newspaper of general circulation published in the county or counties in which the storage, diversion, and use are to be made, and in such other newspapers as the department determines are necessary, once a week for two consecutive weeks.

Public notice of the subject application was published in the Ellensburg *Daily Record* on August 12, 2011, and August 19, 2011.

RCW 90.42.040(5)b also requires that before a trust water certificate can be created or modified, "...the department shall send a notice containing pertinent information to all appropriate state agencies, potentially affected local governments and federally recognized tribal governments, and other interested parties." The department will provide the required notice in July of 2013.

## State Environmental Policy Act (SEPA)

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A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

- (1) It is a surface water right application for more than 1 cfs, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cfs, so long as that irrigation project will not receive public subsidies.
- (2) It is a groundwater right application for more than 2,250 gallons per minute (gpm).
- (3) It is an application that, in combination with other water right applications for the same project, collectively exceeds the amounts above.
- (4) It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA).
- (5) It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

## INVESTIGATION

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In considering this application, the investigation included, but was not limited to, research and/or review of:

- Yakima County Superior Court *Acquavella* Court Claim No. 01939.
- Yakima County Superior Court Conditional Final Order Subbasin No. 9 (Wilson-Naneum), April 17, 2006.
- Yakima County Superior Court Report of Referee Subbasin No. 9 (Wilson-Naneum), June 2000.
- Yakima County Superior Court Supplemental Report of Referee Subbasin No. 9 (Wilson-Naneum), October 14, 2002.
- Yakima County Superior Court Memorandum of Opinion and Order re: Objections to Proposed Conditional Final Order Subbasin No. 9 (Wilson-Naneum), June 15, 2005.
- Yakima County Superior Court Second Memorandum of Opinion and Order re: Objections to Proposed Conditional Final Order Subbasin No. 9 (Wilson-Naneum), April 17, 2006.
- Water Right Change Application No. CS4-01939sb9 and associated documents, July 8, 2011.
- Affidavits of Fabian Kuchin, Jr., dated July 6, 2011 and September 17, 2012.
- Dated Aerial Photos (2005, 2006, 2009 and 2011).
- Infra-red photos from 2005 through 2011.
- Photos of the irrigation delivery system and appurtenant property.
- Water and Natural Resource Group Technical Memorandum on Beneficial Use and Consumptive Use Calculations, October 9, 2012.
- Draft Trust Water Agreement between Ecology and Yakima River Mitigation Water Services LLC, September 30, 2011.
- A site visit to the Kuchin property on March 1, 2013 by the author of this Report of Examination and photos taken of the property during the visit.
- Correspondence and communication with water right holder Fabian Kuchin, Jr., Anne Watanabe and Ecology staff.
- State water code, administrative rules, regulations and policies.
- Washington Irrigation Guide (WIG).
- Ecology Guidance 1210 (GUID 1210).

## History of Water Use

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Mr. Kuchin was confirmed the following two water rights from Whiskey Creek under Court Claim No. 01939 in the Conditional Final Order (CFO) for Subbasin No.9 (Wilson-Naneum) issued on April 17, 2006, by the Yakima County Superior Court in *Acquavella*.

- \* Priority Date June 30, 1870: Diversion of 0.65 cfs and 100 ac-ft/yr for the irrigation of 25 acres from April 1 through October 15 of each year.
- \* Priority Date June 30, 1875: Diversion of 0.338 cfs and 52 af/yr for the irrigation of 13 acres from April 1 through October 15 of each year.

The places of use for the two rights lie adjacent to each other next to Ellensburg's west boundary in Kittitas County. The point of diversion for both rights is on Whiskey Creek which runs along the northern border of both the 1870 and 1875 places of use. Whiskey Creek eventually drains into Mercer Creek, and then Wilson Creek which flows into the Yakima River southeast of Ellensburg.

The Report of Referee for the Yakima adjudication documents that Mr. Kuchin's property was originally owned by Mr. Robert Wallace. Mr. Wallace received U.S. patents and settled on what is now the Kuchin Property in the NW¼ of Section 34 in 1870; and subsequently settled the NE¼ of the Kuchin Property in 1875. Applying the Riparian Doctrine, the Referee deemed such dates the date of priority for each portion of land and estimated the amount of irrigated acreage in each quarter section.

The Referee determined that Mr. Kuchin was entitled to 1 cfs from Whiskey Creek based on a former dispute over water from the creek when the land was owned by Mr. Wallace. Previously, Mr. Wallace had been awarded one quarter of the flow of Whiskey Creek to irrigate both the 1870 and 1875 portions of his land. The Referee equated that amount to be 1 cfs which was divided between the two water rights based on irrigated acres within each POU.

The 1870 portion of Mr. Kuchin's adjudicated claim is senior to most of the water rights on Whiskey Creek.

## Validity and Extent

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### Irrigated Acreage

Of the 25 acres identified as the place of use (POU) under the 1870 portion of Claim No. 01939, Mr. Kuchin has proposed following the westernmost 12 acres. Aerial photos of the property reveal that only 21.65 acres of land are actually within the defined POU. Within those 21.65 acres, 18 acres of pasture have historically and continue to be irrigated using gravity flow, flood irrigation diverted from Whiskey Creek. This is the western portion of a larger field totaling 33 acres. The remaining eastern half of the field falls under the 1875 portion of Claim No. 01939.

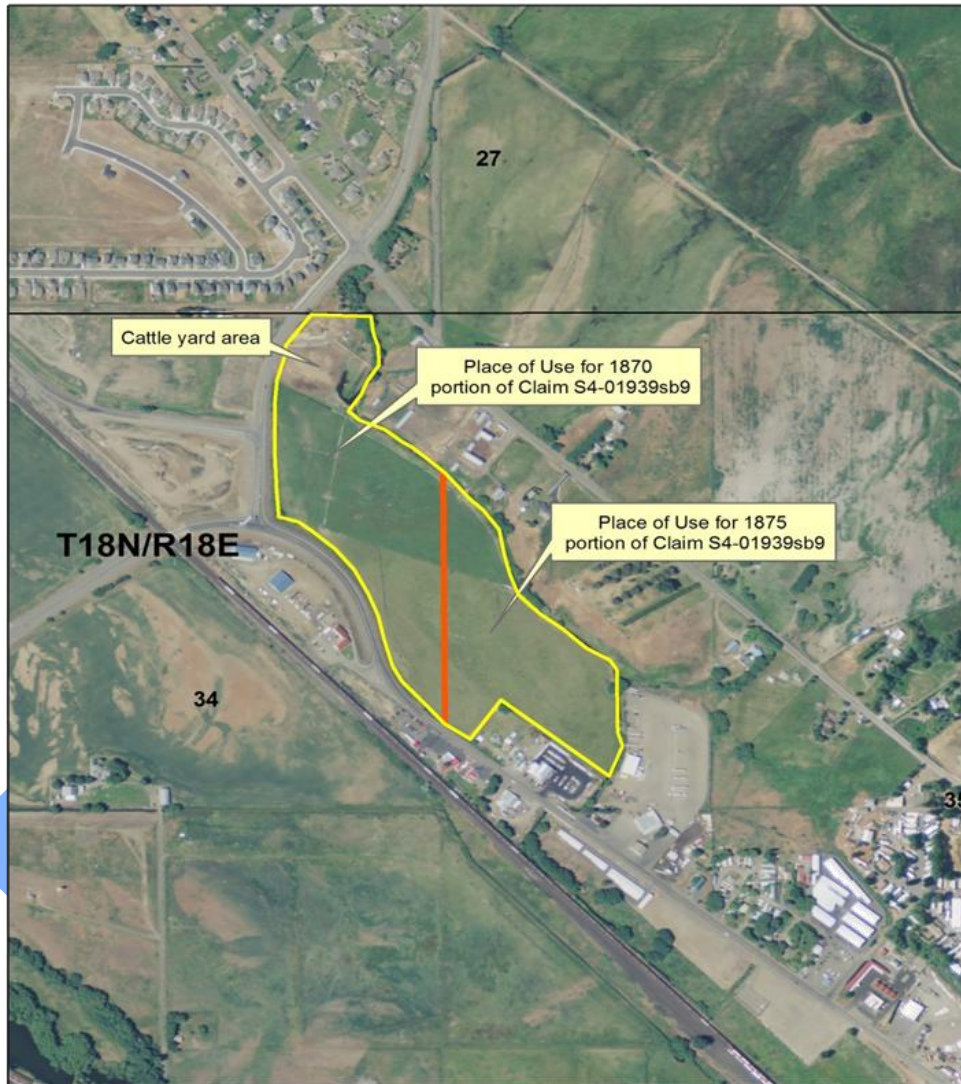
On March 1, 2013, the report writer conducted a field visit to Mr. Kuchin's property to determine how the remaining 3.65 acres within the place of use for the 1870 portion of Claim No. 01939 were used ( $18 + 3.65 = 21.65$ ). Adjacent to the 18 acres of pasture, the remaining 3.65 acres were found to contain a cattle yard, farm/work yard and an area of natural creek bed.

The cattle yard has historically been flood irrigated in the lowest lying area (0.95 acres), and a pump with open hoses or sprinklers used in an elevated portion of the cattle yard (1.17 acres). Based on a review of aerial and infra-red photos over the past 7 years, only 75% of the sprinkler irrigated 1.17 acres (0.88 acres) has produced grass/pasture. The grass/pasture is evident for only half of any irrigation season. The remaining 25% of the elevated cattle yard is bare ground and has not shown evidence of pasture in any available aerial photos.

The remaining 1.53 acres within the 3.65 acre area ( $3.65 - 1.17 - 0.95 = 1.53$ ) contain a work yard, road, creek bed, and a storage area for farm equipment and hay bales. The main use of sprinklers and/or open hoses in this area is to suppress dust. There is no evidence of crop irrigation in this portion of the place of use.

The total irrigated acreage within the 1870 portion of Claim No. 01939 is 19.83 acres, being the sum of the 18 acres of pasture, 0.88 acres of elevated cattle yard and 0.95 acres of flood irrigated cattle yard.

Fabian Kuchin Jr.  
Trust Water Application CS4-01939sb9



### Irrigation System

Mr. Kuchin's diversion point includes a main gate structure and pump. Mr. Kuchin irrigates the field by creating a "pond" on the northwestern part of the property using a weir to back up Whiskey Creek water. The water is then allowed to flow through a 16-inch pipe to a collection box in the northwest portion of the Kuchin Property. From the collection box, water flows through a 10-inch "Y" pipe which is

connected to a gated pipe system heading east, and a transmission line heading south. The gated pipeline system includes approximately 645 feet of pipe that runs easterly and is then reduced to an 8-inch PVC pipe that extends approximately 855 feet. The delivery system that runs south from the collection box includes approximately 325 feet of 10-inch line that also reduces to an 8-inch PVC pipe that extends approximately 489 feet. There is no water measuring device within this portion of the irrigation system.

In addition, a four horsepower pump diverts water from the pond through 1½ inch pipe, at a rate of approximately 50 to 60 gpm, to hoses and sometimes sprinklers. The pump is used to irrigate the pasture covered portion of the cattle yard area and supplies water for dust control in the farm and storage yard areas. There is no water meter or isolated power meter to determine actual water use delivered by the pump.

### Water Use

Aerial and infra-red photos of the Kuchin property show that irrigation has taken place on the large field and low lying portions of the cattle yard through the entire irrigation season for at least two of the past five years. Water applied to the remaining portion of the cattle yard has sustained pasture no more than half of any season during that time.

Without a measuring device on the diversion structure, the actual quantity of water diverted by the applicant is unknown and must be estimated. The applicant's irrigation requirements and consumptive water use can be estimated by using the Washington Irrigation Guide (WIG) combined with Ecology's Guidance 1210 (GUID 1210). The total estimated water use within the 1870 portion of the place of use for Mr. Kuchin's claim is found in the "Trust Water Right Calculations" portion of this report.

### Other Rights Appurtenant to the Existing Place of Use

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The Ellensburg Water Company's (EWC) POU for Adjudicated Court Claim No.0194 includes the Kuchin property. The EWC can supply water to several thousand acres of land in the Ellensburg area. As explained in the Report of Referee and in Mr. Kuchin's July 6, 2011 Affidavit, Ellensburg Water Company water can be released from the Town Ditch into the Whiskey Creek channel which conveys water to the applicant's property. According to the Affidavit, Mr. Kuchin has 28.5 shares of EWC water available for use upon his request. According to a memo dated January 23, 2012, Mr. Kuchin stated that he has requested EWC water mainly for his property on the north side of the creek and not for use within the POU of Claim No. 01939.

No other water rights were found appurtenant to the subject POU.

### Proposed Use

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The applicant proposes to transfer a part of The 1870 portion of Claim No. 01939 to the TWRP for the purpose of instream flow in Whiskey Creek and ultimately the Yakima River for water banking to offset the consumptive quantities associated with new groundwater uses in accordance with Chapter 173-539A WAC, and the Trust Water Right Agreement between Ecology and Yakima River Mitigation Water Services LLC dated September 30, 2011.

To provide water for trust, Mr. Kuchin has proposed following the westernmost 12 acres within the POU for the 1870 portion of Claim No. 01939. This includes the 3.65 acres where the creek bed, cattle and farm yards are found and 8.35 acres of the flood irrigated field. This would leave 9.65 acres of pasture to be irrigated by the applicant under the remaining portion of Claim No. 01939 with the 1870 priority date. The remaining 9.65 acres will be contiguous with the 1875 portion of the claim No. 01939's POU.

## Proposed Trust Water Right Place of Use

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As described in GUID 1210, the POU of a trust water right for instream flows is defined within a primary reach and a secondary reach as applicable. The primary reach is the portion of a water body that benefits from both the former consumptive use and return flow waters. It is the reach between the original diversion/withdrawal point and the point where the last return flows re-enter the stream or river. The secondary reach is the portion of a water body that received return flow waters while the water right was exercised for its original purpose. The secondary reach is located downstream from the point where return flows from the historic use under the water right re-entered the stream or river. *Guide 1210* defines return flow as, "the sum of deep percolation and runoff that returns to waters of the State or would return to waters of the State but is intercepted by a water user".

### Primary Reach

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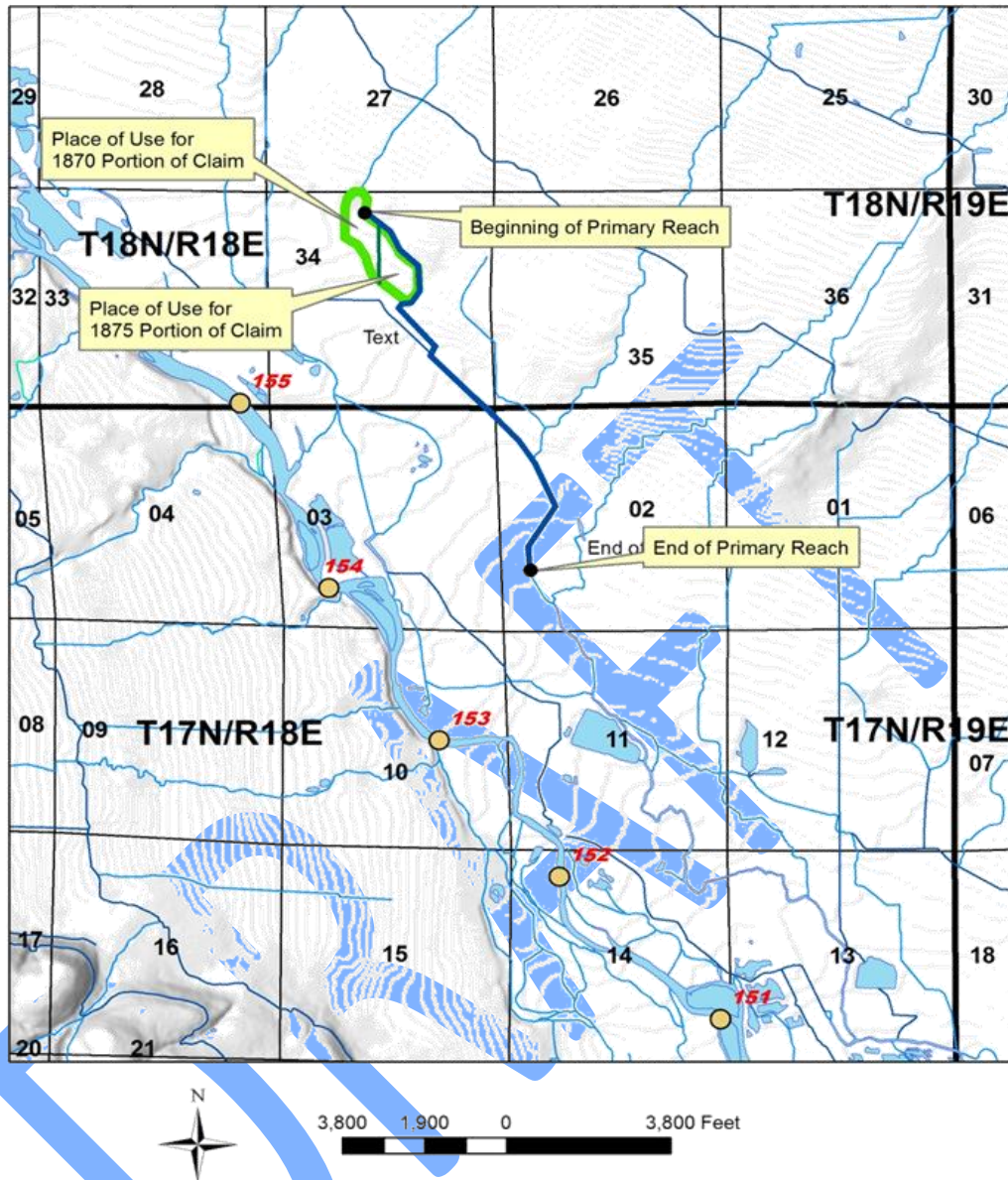
The primary reach begins at the historic point of diversion on Whiskey Creek that is approximately 450 feet south and 400 feet west from the north quarter corner of Section 34, being within the NE $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 34, Township 18 North, Range 18 E.W.M. It can also be defined by Latitude 47.012579 and Longitude 120.573140. It ends downstream of where Whiskey Creek flows into Mercer Creek at a point on Mercer Creek, within the NW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 2, Township 17 North, Range 18 E.W.M. More specifically, 1363 feet north and 686 feet east of the southwest corner of Section 2; also defined as approximately, Latitude 46.988247, Longitude 120.557379.

### Secondary Reach

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The secondary reach begins at the end of the primary reach as defined above and continues down Mercer Creek which flows into Wilson Creek. It continues down Wilson Creek to where it flows into the Yakima River at a point located approximately 966 feet west from the NE  $\frac{1}{4}$  corner of Section 31, Township 17 North, Range 19 East, W.M., then approximately 3,678 feet southwesterly to the Yakima River at approximately River Mile 147, and continues down the Yakima River to its confluence with the Columbia River.

Fabian Kuchin Jr. Trust Water Application  
CS4-01939sb9



## Trust Water Right Calculations

### *Washington Irrigation Guide (USDA, 1990) Method*

The Washington Irrigation Guide (WIG) estimates historical crop use water requirements. The net irrigation requirements for various crops and locations throughout the state are provided based on long-term average climate conditions. The WIG contains technical information and procedures that can be used to plan and manage irrigation systems as well as develop quantities of crop consumptive use for various areas throughout Washington State. The crop use requirements are derived from a modified Blaney-Criddle method.

To estimate water use on the Kuchin Property, the WIG values of Crop Irrigation Requirements (CIR) for pasture were used for the area near Ellensburg, Washington. The irrigation season is documented as beginning on May 13<sup>th</sup> and ending October 14<sup>th</sup> (155 day irrigation season). The irrigation season identified in the WIG is shorter than the season granted under Claim No. 01939 which is from April 1<sup>st</sup> through October 15<sup>th</sup>. The shorter season will be used to estimate the actual water use since it is an average over many years.

The CIR value from the WIG for pasture/turf in Ellensburg is 31.46 inches (2.622 feet). To calculate the consumptive use (CU) portion of the irrigation water applied at the applicant's POU, the Total Irrigation Requirement (TIR) is first determined. The TIR and CU are calculated based on the estimated irrigation system efficiency (Ea), associated system evaporative loss (%Evap.), and CIR value using the following relationships from GUID 1210.

Where:  $TIR = CIR \div Ea$

And:  $CU = (TIR \times \%Evap.) + CIR$

The values in Table 2 below, from GUID 1210, give the average value of efficiency and evaporation for the two methods of irrigation used by the applicant. The average TIR and CU for the 19.83 irrigated acres can then be calculated (see Table 3). The average values are used for the estimate since no actual water quantities diverted are known.

**TABLE 2: Pasture Irrigation Requirement per Year = 2.622 ft (31.46 inches)**

<b>Area</b>	(flood irrigated) = 18.95 acres	(sprinkler irrigated) = 0.88 acres
<b>Average Irrigation Efficiency (Ea)</b>	(flood) = 50%	(sprinkler) = 75%
<b>Average Evaporation (%Evap.)</b>	(flood) = 5%	(sprinkler) = 10%

Table 3 below shows the estimated TIR and associated CU values calculated using the average efficiency values and relationships from GUID 1210 above.

**TABLE 3: ESTIMATE OF KUCHIN WATER USE ASSUMING AVERAGE EFFICIENCIES**

Method	Number of irrigated acres	Crop Type	Crop requirement in inches (WIG)	Crop Irrigation Requirement in ac-ft/yr	Total Irrigation Requirement in ac-ft/yr	App. Efficiency (%)	% Total Evaporated	Total Consumed (ac-ft/yr)	Return Flow (ac-ft/yr)
Flood	18.95	Pasture	31.46	49.69	99.37	50	5	54.65	44.72
Sprinkler	1.17(75%) = 0.88	Pasture	31.46	2.31	1.54*	75	10	1.31*	0.23
<b>TOTAL</b>	<b>19.83</b>			<b>52.00</b>	<b>100.91</b>			<b>55.96</b>	<b>44.95</b>

**\*These values are based on one half of the irrigation season**

The estimated TIR for the 18.95 acres of flood irrigated land on the Kuchin Property is 99.37 ac-ft; of which the total consumed portion, including the 5% evaporation loss, is 54.65 ac-ft. The 99.37 ac-ft estimate is very close to the annual quantity of 100 ac-ft awarded to Mr. Kuchin from Whiskey Creek in the adjudication. It can reasonably be concluded that the efficiency of Mr. Kuchin's flood irrigation system is close to 50% since the field typically has been irrigated during an entire irrigation season without EWC water being needed.

The TIR and CU values per acre for the flood irrigated portion are calculated as follows:

$$\text{IR (per acre)} = 99.37 \text{ af} \div 18.85 \text{ acres} = 5.24 \text{ ac-ft/acre}$$

$$\text{CU (per acre)} = 54.65 \text{ af} \div 18.95 \text{ acres} = 2.88 \text{ ac-ft/acre}$$

The small sprinkler irrigated portion's CU is calculated to be 2.97 acre-feet per acre (ac-ft/acre) (this assumes a full season of crop production) and a TIR value of 3.5 ac-ft/acre.

### Conclusions of Consumptive Use (CU) Calculations

Since the annual quantity of 100 ac-ft authorized under the 1870 portion of Claim No. 01939 is consistent with the crop requirements as calculated using the WIG and Ecology's GUID 1210 for the total 19.83 acres irrigated, it is reasonable to conclude that the entire 100 ac-ft was diverted annually with little need for Ellensburg Water Company shares. The shares, when used, would be supplementing the 1875 portion of Claim No. 01939 since it is junior to other water rights on Whiskey Creek.

Although the Court awarded Mr. Kuchin 100 ac-ft for 25 acres, which would equate to 4 ac-ft/acre and not completely meet the requirements of flood irrigated pasture in that area (5.24 ac-ft/acre), only 19.83 acres of land are irrigated with the full quantity. Therefore, the calculated CU value of 2.88 ac-ft/acre (which results from a 50% irrigation efficiency and TIR of 100.91 ac-ft/yr) will be used to calculate the total quantity of "consumptive" water available for instream flow and/or mitigation use.

The consumptive water use that would result from the 12 acres that Mr. Kuchin intends to fallow and make available to the TWRP is as follows:

<b>Type of Irrigated Acres</b>	<b>Number of Acres to be Fallowed</b>	<b>% of Season Irrigated (producing pasture)</b>	<b>Consumptive Water Duty (ac-ft/acre)</b>	<b>Consumptive Use (ac-ft)</b>	<b>Total Irrigation Requirement (ac-ft/acre)</b>	<b>Total water use to be transferred to the TWRP</b>
Large field - Flood	8.35	100%	2.88	24.05	5.24	43.75
Cattle yard - Flood	0.95	100%	2.88	2.74	5.24	4.98

Table 4 continued on page 18

Table 4 continued from page 17

Type of Irrigated Acres	Number of Acres to be Fallowed	% of Season Irrigated (producing pasture)	Consumptive Water Duty (ac-ft/acre)	Consumptive Use (ac-ft)	Total Irrigation Requirement (ac-ft/acre)	Total water use to be transferred to the TWRP
Cattle Yard - Sprinkler	1.17 (75% producing pasture) = 0.88	50%	2.97	$2.97 \times 0.88 \times 0.5 = 1.31$	3.50	$3.50 \times 0.88 \times 0.5 = 1.54$
Farm/work yard - Dust control	1.53	0%	--	--		--
Total	12			28.10*		50.27*

\* The total irrigation requirement of 50.27 ac-ft exceeds the quantity (48 ac-ft) the applicant has requested be put into the TWRP by 2.27 ac-ft. However, with only a 2% increase in the irrigation efficiency assumed, the TIR will reduce to 48 ac-ft and the CU to 27.89 ac-ft. A 52% irrigation efficiency for a gated pipe flood irrigation system in this area is reasonable and will be used for the purposes of calculating the quantities of water accepted into the TWRP.

The portion of Claim No. 01939 available for transfer to the TWRP is 48 ac-ft, of which 27.89 ac-ft is considered consumptive. The primary reach as defined previously in the report would benefit from the entire 48 ac-ft with an instream flow rate of 0.312 cfs from May 13<sup>th</sup> to October 14<sup>th</sup>.

The remaining 52 ac-ft of water will stay appurtenant to the remaining 9.65 acres within the POU.

#### Instream Flow Calculations

The instream flow in the secondary reach is determined on a month to month basis as average cfs and total ac-ft of consumptive use. The monthly consumptive use for irrigation was determined by allocating the 27.89 ac-ft per year of total consumptive use proportionally throughout the irrigation season based on the monthly crop requirements presented in the WIG as follows: 9.76% in May (the 13<sup>th</sup> to the 31<sup>st</sup>), 21.61% in June, 29.62% in July, 23.62% in August, 13.45% in September and 1.91% in October through the 15<sup>th</sup>. The monthly CU values were converted to cfs to obtain the average monthly instantaneous rate used to augment instream flow along the secondary reach.

Table 5: Monthly Distribution of Water Available in the Secondary Reach of 27.89 ac-ft							
Month	May	June	July	August	September	October	Total
Monthly Qa (in ac-ft)	2.73	6.05	8.29	6.61	3.76	0.54	27.89
Qi (cfs)	0.076	0.102	0.135	0.107	0.063	0.019	N/A

## Trust Water Right Management

The consumptive use for a portion of Claim No. 01939 with a priority date of June 30, 1870, is being changed to instream flow for water banking purposes. As a condition of placing these water rights into the TWRP, the water may be made available as mitigation to address the issue of third-party impairment with respect to new out-of-priority water rights consistent with Chapter 173-539A WAC. The details can be viewed in the Trust Water Right Agreement between Yakima River Mitigation Water Services LLC and the Washington State Department of Ecology.

When any portion of this trust water is available and not being used for water banking or other authorized purposes, those quantities will be added to the instream target flows managed by the U.S. Bureau of Reclamation at Parker and continue downstream to the Yakima River's confluence with the Columbia River. If the water is used to offset consumptive use by new water users purchasing mitigation credits from the Yakima River Mitigation Exchange, or any other new use to be mitigated by the subject right, then the trust water right will not be added to the instream target flows at Parker.

## **LEGAL EVALUATIONS**

### Water Availability and Beneficial use

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Placing a water right or a portion of a water right into the TWRP for the purpose of instream flow and providing mitigation water through the creation of water banks is a beneficial use under RCW. 90.42.005(2)(d) and 90.54.020(1).

Whiskey Creek has been a reliable source of water for the 1870 portion of Claim No. 01939 due to the perennial nature of Whiskey Creek and senior priority date. For water to be made available for instream flow and water banking purposes, a portion of land which historically received irrigation water must be fallowed. Mr. Kuchin has agreed to fallow the indicated portion (12 acres) of the POU of Claim No. 01939 to provide water to the TWRP for the indicated uses.

### Impairment Considerations

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Under RCW 90.38.040(5)(a), a trust water right may be exercised only if Ecology first determines that the authorization will not impair any other water right. Increased stream flow in Whiskey, Mercer, and Wilson Creeks in addition to the Yakima River during the irrigation season are not anticipated to cause impairment to other water users.

The transfer of a portion of Mr. Kuchin's Whiskey Creek water right into the TWRP for the purpose of instream flow and water banking does not, by itself, result in impairment to other water users. However, it is noted that the land that is irrigated under this creek right is also entitled to be irrigated with water from the Ellensburg Water Company. Therefore, if Mr. Kuchin or his successors in ownership should choose to irrigate the same lands formerly irrigated under the 1870 portion of Claim No. 01939 that has been placed into the TWRP, then this action would result in a negative impact to the water supply of the Yakima River system.

New groundwater users seeking to rely on this water right for mitigation will be required to apply for a Water Budget Neutral Determination. This determination will include a detailed evaluation of the potential for impairment of existing rights according to WAC 173-539A-060(4)(a)-(d).

## Public Interest Considerations

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Pursuant to RCW 90.42.040(4)(a) exercise of a trust water right may be authorized only if the department first determines that the public interest will not be harmed. Ecology must consider how the change in purpose and acceptance into the TWRP will affect a variety of factors such as wildlife habitat, recreation, water quality, and human health. Each of these factors has been taken into account during the consideration of this application. The intent of the TWRP is to provide vital instream flow in areas such as the Yakima River Basin for the benefit of humans, fish and wildlife and/or provide mitigation for those new uses of water that might have otherwise had a potential detrimental effect.

## Conclusions

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The author makes a tentative determination in accordance with RCWs 90.03.380 and 90.42.040 that:

Adjudicated Court Claim No. 01930 (1870 priority date portion) represents a valid water right for 0.65 cfs, 100 acre-feet per year for the irrigation of 19.83 acres. The following requested changes can be made to Claim No. 01939 without impairment to other water rights and would not constitute enlargement of the right.

- The transfer of 0.312 cfs and 48 ac-ft to Ecology's Trust Water Right Program for the purpose of instream flow in Whiskey Creek to the Yakima River, via Mercer and Wilson Creeks, and the Yakima River to its confluence with the Columbia River.
- Water quantities indicated in Table 5 may be used for the purpose of water banking.
- The remaining portion of Claim No. 01939 with the 1870 priority date be reduced to 0.338 cfs and 52 ac-ft annually for the purpose of irrigation and will remain appurtenant to that portion of the original place of use reduced by the 12 acres indicated above.
- The changes are beneficial and in the public interest.

## RECOMMENDATION

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Based on the above investigation and considerations, I recommend the request for the change in the POU and purpose of use be approved in the amounts and within the limitations listed below.

## Purposes of Use and Authorized Quantities

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Instream flow and water banking to offset the consumptive quantities associated with new groundwater uses in the Yakima Basin, as follows (Secondary Reach):

TABLE 5							
	May	June	July	August	September	October	
Q <sub>i</sub> (cfs)	0.076	0.102	0.135	0.107	0.063	0.019	
Q <sub>a</sub> (ac-ft/yr)	2.73	6.05	8.29	6.61	3.76	0.54	Total = 27.89

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Report Writer

\_\_\_\_\_  
Date

**Reported By: Patricia Kirk**  
**Trust Water Coordinator**  
**Office of Columbia River**